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amend. req 4-7-04

**IN THE CLAIMS:**

Please amend claims 1, 3, 4, 5, 9, 11, 12, 13, 17, 19, 20, and 21, and please cancel claims 2, 10, 18, and 37-40, as set forth below.

1           1.       (Currently Amended) A thermal management system for an integrated  
2 circuit die comprising:  
3 a temperature detection element formed directly on the integrated circuit die, the  
4 temperature detection element including at least one temperature sensor having an  
5 output, the at least one temperature sensor including[[:]]  
6 a reference voltage source providing a reference voltage,  
7 a programmable voltage source providing a programmable voltage proportional to  
8 a temperature of the integrated circuit die, and  
9 a comparator having one input coupled via a first signal line to the reference  
10 voltage source and another input coupled via a second signal line to the  
11 programmable voltage source, the comparator to provide a signal at the  
12 output of the at least one temperature sensor in response to the  
13 programmable voltage substantially equaling the reference voltage;  
14 a power modulation element formed directly on the integrated circuit die, the power  
15 modulation element to reduce power consumption of the integrated circuit die in  
16 response to the output of the at least one temperature sensor;  
17 a control element formed directly on the integrated circuit die, the control element  
18 including at least one register to provide an enable/disable bit for the thermal  
19 management system; and  
20 a visibility element formed directly on the integrated circuit die, the visibility element to  
21 indicate a status of the output of the at least one temperature sensor.

2.       (Canceled)